

REMARKS

In view of the preceding amendments and the comments which follow, and pursuant to 37 C.F.R. § 1.111, amendment and reconsideration of the Office Action, mailed on January 15, 2005 is respectfully requested by Applicants.

Summary

Claims 6 and 16 - 19 stand rejected. Claim 6 has been cancelled. Claims 27 – 29 have been added. No new matter has been introduced as a result of these amendments. Claims 16 – 19, and 27 – 29 are pending following entry of the present remarks.

Rejection under 35 U.S.C. § 103

The Examiner has rejected Claims 6 and 16 – 19 under 35 U.S.C. § 103 (a) as being unpatentable over Maunakata et al. (Munakata) (U.S. Patent 5,540,245) in view of Harris (Harris) (U.S. Patent 2,834,952), Faidley (Faidley) or Estes (Estes). Although, Applicants respectfully traverse this rejection, Claim 6 has been cancelled and new Claims 27 – 29 have been added to clarify the claimed invention.

New independent Claim 27 is directed to a wet treatment nozzle. The wet treatment nozzle comprises an ultrasonic cleaner, an introduction passage for introducing a treatment liquid on a side of the ultrasonic cleaner, and an exhaust passage which exhausts the treatment liquid on an other side of the ultrasonic cleaner after a wet treatment of an object to be treated. Claim 27 further recites that the ultrasonic cleaner, while vibrating, guides the treatment liquid to wet treat the object to be treated.

Applicants also submit that the following reference combinations, Munakata and Harris, Munakata and Faidley, and Munakata and Estes, may not properly be combined to reject Claim 6 under 35 U.S.C. 103(a) because Munakata fails to teach or suggest the claimed structure of the wet treatment nozzle. Munakata discloses a wafer processing equipment that comprises a water jet device. The water jet device has a water inlet (introduction passage), an overflow outlet, and a jet outlet (exhaust passage). In Munakata, the introduction passage is formed in one side of the side walls

of the water jet device, the overflow outlet configured to drain excess is formed on the other of side walls of the water jet device, and the jet outlet is formed in the bottom wall of the water jet device (column 4, lines 34 – 49). Munakata discloses that when a wafer W (object to be cleaned) is passed under the cleaning water jet device while water is jetted to the main surface of the wafer (column 6, lines 6 – 19). Thus, the wafer is cleaned by the cleaning water that has been exhausted out of the jet outlet, and the liquid that exits through the overflow outlet has not treated the wafer (object). In contrast, as claimed, the treatment liquid that has treated the object is exhausted via the exhaust passage following a wet treatment of the object to be treated.

Thus, Munakata fails to teach or suggest this above discussed claimed features of Claim 27. Harris, Faidley and Estes, cited by the Examiner as disclosing a weight provided on the housing of the ultrasonic cleaner, also fail to teach or suggest the above-discussed claimed features of Claim 27.

New Claim 27 further recites that a weight provided on a wall of the housing minimizes propagation of energy from the ultrasonic transducer to a wall of the housing by shifting the characteristic frequency of the wall of the housing. In contrast, the cited references, Faidley and Estes, disclose that the weight serves to provide and/or maintain stability of the corresponding housing, (column 1, lines 53 – 56) and (column 2, lines 30 – 39) respectively. That is, both Faidley and Estes fail to teach or suggest that the weight serves to minimize a propagation of energy from the ultrasonic transducer to the wall of the corresponding housing.

The cited Harris reference discloses that the weight affixed to the vertex of the housing (cone) is for the purpose of lowering and narrowing the resonant frequency of the transducer (column 3, lines 47 – 64). That is, Harris also fail to teach or suggest that the weight serves to minimize a propagation of energy from the ultrasonic transducer to a wall of the corresponding housing.

Therefore, the following reference combinations, Munakata and Harris, Munakata and Faidley, and Munakata and Estes, may not properly be used to reject Claim 27 under 35 USC 103(a).

Accordingly Claim 27 is allowable, as well as dependent Claims 16 - 19, and 28 – 29. Applicants respectfully request that these rejections of Claims under 35 USC 103(a) be withdrawn.

Conclusion

Applicants submit that this application is now in condition for allowance, and favorable reconsideration of this application in view of the above amendments and remarks is respectfully requested. If, there are any fees due, Applicants request that this paper constitutes any necessary petition and authorizes the Commissioner to charge any underpayment, or credit any overpayment, to Deposit Account No. 23-1925.

If the examiner finds that there are any outstanding issues which may be resolved by a telephone interview, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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